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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: M. MIZUNO

Serial No.: 10/764,600

Filed: January 27, 2004

For: STORAGE SYSTEM

**PETITION TO MAKE SPECIAL  
UNDER 37 CFR 1.102(d) and MPEP. §708.02, VIII**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

November 9, 2004

Sir:

**1. Petition**

Applicants hereby petition to make this application **Special**, in accordance with 37 CFR §1.102(d) and MPEP 708.02, VIII. The present invention is a new application filed in the United States Patent and Trademark Office on January 27, 2004 and as such has not received any examination by the Examiner.

**2. Claims**

Applicants hereby represent that all the claims in the present application are directed to a single invention. If upon examination it is determined that all the claims presented are not directed to a single invention, Applicants will make an election without traverse as a prerequisite to the granting of special status.

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### **3. Search**

Applicants hereby submit that a pre-examination search has been made by a professional searcher, (a copy of which is attached), in the following classes and subclasses:

<u>Class</u>	<u>Subclass</u>
707	10, 203, 205
709	219
711	112, 114, 118, 144, 153, 156, 163, 202

### **4. Copy of References**

A listing of all references found by the professional searcher is provided on a Form PTO-1449 and copies of the references and the Form PTO-1449 are submitted as part of an Information Disclosure Statement (IDS) filed on even date.

### **5. Detailed Discussion of the References and Distinctions Between the References and the Claims**

Below is a discussion of the references uncovered by the search and cited in the IDS filed on even date that appear to be most closely related to the subject matter encompassed by the claims of the present application, and which discussion particularly points out how Applicants' claimed subject matter is distinguishable over those references. All other references uncovered by the search and cited in the IDS filed on even date are **not** treated in detail herein.

#### **a. Detailed Discussion of the References**

**U.S. Patent N o. 5,948,062 ( Tzelnic e t a l.), assigned to EMC corporation,**

discloses a network file server using a cached disk array storing a network file directory including file locking information and data mover computers each having file system software for shared read-write file access that includes a cached disk storage subsystem, which may store a file directory accessible by data mover computers in response to file access requests to determine whether or not file access for a client is permitted. The data mover computer may perform file system tasks such managing directory for mapping of file names to logical blocks and locking and unlocking of files. To minimize loading on the cached disk array 23 during file access, each data mover may have a local cache of file directory information. Locking information in one local cache of a data mover may be replicated in another local cache (see column 2 lines 16-19, lines 22-27; column 10, lines 62-65; and column 11 lines 1-3).

**U.S. Patent Application Publication No. 2003/0140207 A1 (Nagase et al.),** assigned to Hitachi, Ltd., discloses a hierarchical storage apparatus and control apparatus thereof that includes a controller 201 which may include a communication interface 206 and a processor 207. The controller 201 may receive write and read requests from one or more hosts via an interface 206 and temporarily store a corresponding data block in a cache memory 203 (see figure 4, paragraph 33).

**U.S. Patent Application Publication No. 2003/0204677 A1 (Bergsten)** discloses a storage cache descriptor that includes a storage controller, which may store electronic data in a cache by including a cache descriptor that defines data, contained in a cache block, the cache descriptor including at least one field describing a device block of the cache block. Additionally, an electronic data storage apparatus may

include a means for controlling data storage communicatively coupled to data storing means and means for caching data communicatively coupled to the controlling means (see paragraphs 7 and 8).

**U.S. Patent Application Publication No. 2004/0148479 A1 (Patel et al.),** assigned to International Business Machines Corporation, discloses a method, system, and program for transferring data that includes hosts 2a...2n which may include a cache 20a...20n that may include cached data volumes from storage 4 as well as metadata 24a...24n generated from storage manager 12. I/O managers 26a...26n may queue I/O requests in pending queue 16 if the host metadata 24a...24n indicate that a target location of data volumes 22a...22n from storage 4 is locked or being accessed as part of a data move operation (see figure 1, paragraph 20).

**b. Distinctions Between the References and the Claims**

The present invention as recited in the claims filed are not taught or suggested by any of the above noted references whether taken individually or in combination with each other or in combination with any of the other references now of record.

The present invention as recited in the claims is directed to a cache storage system connected to a client and at least one storage device through a network that includes a controller and a device, where the controller controls the device to temporarily store block data which are exchanged between the client and the at least one storage device through the network and which designate a logical address on a storage medium and a data length.

The above described features of the present invention, particularly a cache storage system that includes a controller and a device, where the controller controls the device to temporarily store block data which designate a logical address on a storage medium and a data length, are not taught or suggested by any of the references of record whether taken individually or in combination with each other.

**6. Fee (37 C.F.R. 1.17(i))**

The fee required by 37 C.F.R. § 1.17(i) is to be paid by:

☒ the Credit Card Payment Form (attached) for \$130.00.

☐ charging Account \_\_\_\_\_ the sum of \$130.00.

A duplicate of this petition is attached.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (500.44034x00).

Respectfully submitted,

Antonelli, Terry, Stout & Kraus, LLP



Frederick D. Bailey  
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FDB/sdb  
Enclosures